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PLANT IMMIGRANTS

Descriptive notes furnished mainly by Agricultural Explorers and Foreign Correspondents relative to the more important introduced plants which have arrived during the month at the Office of Foreign Seed and Plant Introduction of the Bureau of Plant Industry of the Department of Agriculture. These descriptions are revised and published later in the Inventory of Plants Imported.

No. 113. SEPTEMBER 1915.

Genera Represented in This Number.

Allium	41056	Melinis	41148
Amygdalus	41149	Myrica	41256
Buddleia	41114	Osteomeles	41111
Cacara	41143, 41167	Oxalis	41168-176
Carica	41147, 41298	Pennisetum	41055
Chayota	41092-096	Pimenta	41134
	41135-140	Polakowskia	41141
Chionanthus	41259	Primula	41277-281
Citrullus	41164	Prunus	41257
Citrus	41088-091, 41099	Solanum	41197-243, 41312
	41124, 41270	Triticum	41064-087
Escallonia	41105, 41112	Tropaeolum	41185-186
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Plates:

Near view of Tree-Hazel, Kansu, China.
Diospyros Lotus Fruits, Natural Size.
The Pitaya Fruit in Cross-Section.
Loaf of Bread Persimmon, Natural Size.

Applications for material listed in these multigraphed sheets may be made at any time to this Office. As they are received they are placed on file, and when the material is ready for the use of experimenters it is sent to those on the list of applicants who can show that they are prepared to care for it, as well as to others selected because of their special fitness to experiment with the particular plants imported. Do not wait for the Autumn Catalogue.

One of the main objects of the Office of Foreign Seed and Plant Introduction is to secure material for plant experimenters, and it will undertake as far as possible to fill any specific requests for foreign seeds or plants from plant breeders and others interested.

Permission to publish on application only.

Allium cepa L. (Liliaceae.) 41056. Seeds of an onion from Tarum, about 24 miles west of Zendjan (Zinjan), west-Persia. Presented by Mr. R. S. Reed at the request of Col. J. N. Merrill, Persian Army. "Tarum is at an elevation of about 4000 feet; irrigation is used; soil gravelly, probably contains alkali. They are the largest onions I have seen, some of them being six inches in diameter by four in depth or larger. Mr. Reed says the onions of Tarum are much esteemed by the Persians who eat them raw as they have such a good flavor." (*Merrill.*)

The following peach seeds and many others have been introduced for the studies of the Office of Horticultural and Pomological Investigations. Steps will be taken to secure plants of the best of these varieties for trial in the United States.

Amygdalus persica L. (Amygdalaceae.) 41149. Seeds of two different strains of peach from Chungking, China. Presented by the American Consul. "These peaches are locally known as *Hsiang T'ao* or Fragrant Peach, and *Chieh T'ao* or Firm Peach. The *Hsiang T'ao* is a large peach and its skin and meat are partly red. It becomes soft when ripe and the seed is readily extracted. It has a very delicious flavor. The *Chieh T'ao* is slightly smaller in size than the *Hsiang T'ao*, and when ripe, its meat is still quite firm. This peach ripens in this climate during the latter part of June, while the *Hsiang T'ao* ripens about a fortnight earlier. This is also a very finely flavored peach, but not quite so sweet as the other. These peaches are comparatively free from imperfections, a fact which is noteworthy in view of an absence of pest preventive measures." (*Myrl S. Myers.*)

Buddleia incana Ruiz & Pavon. (Loganiaceae.) 41114. Cuttings of *quishuar* from Pinasniocj, Peru. Presented by Mr. O. F. Cook. "A tree with grayish foliage somewhat resembling the olive, with rather attractive clusters of yellow flowers. It grows on the high tablelands of southern Peru where frosts are of rare occurrence during the winter season. It grows rapidly and propagates readily from cuttings. The wood is said to be very hard and durable. Of possible interest for ornamental planting or windbreaks in the coast district of southern California." (*Cook.*)

Cacara erosa (L.) Kuntze. (Fabaceae.) 41143. Seeds of yambeans from Calcutta, India and Buitenzorg, Java. Presented by the Economic Botanist, Botanical Survey of India and the Director, Department of Agriculture, Java. "The plant is described as a bean with an edible tuber. The tubers are usually the size of an orange. Flesh white, somewhat like a turnip. It is usually eaten raw, though I

believe the Chinese sometimes cook it with pork, and the Burmese with their curries. This vine requires a long season. The tuber is cooling and refreshing, being as juicy as an artichoke." 41167. "*Bangkoewang*. This variety is the only one cultivated by the natives here."

Carica papaya L. (Caricaceae.) 41167. Seeds of a papaya from Macuco, Estado do Rio, Brazil. Presented by Mr. T. R. Day. "*Mamao* (pronounced 'Mamong' very nearly, with accent on the second syllable) appears to be the same as the papaya of India, but the fruit here like that of the Brazilian mango also is superior to the Indian varieties we have encountered, although it is not so esteemed here here as it is by the natives in India. This is an unusually good variety, and we think that if not already introduced or experimented with, it is well worth trail in the United States in sheltered places where there is practically no winter. It will grow in any soil, and fruits within twelve months, continuing in bearing for some or five years. Among other uses it serves as a very good shade tree for young fruit plantations of tender varieties, as it is such an extraordinary rapid grower, and is very easily cut out when it has served its part." (*Day*.)

Carica quercifolia (St. Hil.) Benth. & Hook. (Caricaceae.) 41298. Seeds from Buenos Aires, Argentina. Presented by Mr. Benito J. Carrasco, Director General, Botanic garden.- A small tree, closely related to the papaya (*C. papaya*,) usually forming a rather straggly growth up to 20 feet in height. The alternate leaves are simple, entire to lyrate-lobed, the blades often 12 inches long by 8 inches broad, smooth, and somewhat glaucous. The flowers are dioecious, greenish yellow, in small, rather inconspicuous clusters. The fruit is a pulpy berry 4 to 7½ inches long, tasting somewhat like a papaya fruit. The juice is said to have medicinal properties, being regard ed as anthelmintic. The leaves are also used as soap in cleansing goods. (*Adapted from Thos. Morong*.)

Chayota edulis Jacq. (Cucurbitaceae.) 41092-96. Fruits of five varieties of chayote from Kingston, Jamaica. Presented by Mr. Wm. Harris, Superintendent Hope Gardens. "Spiny green, large smooth green, medium sized green, small green, and long white."

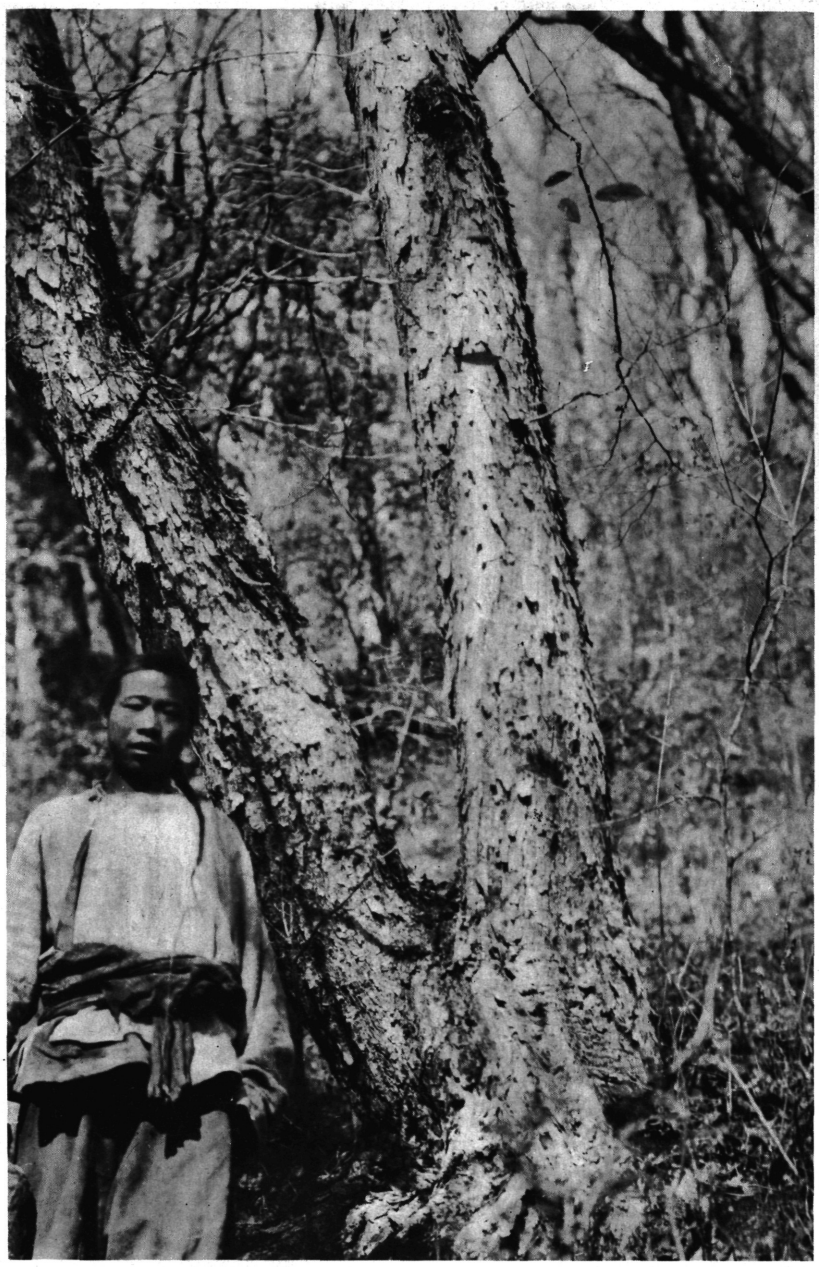
Chayota edulis Jacq. (Cucurbitaceae.) 41135-40. Fruits of six varieties of chayote from San José, Costa Rica. Presented by Mr. J. E. Van der Laat, Director, Department of Agriculture, through Dr. Carlos Wercklé. "Small white, spiny white, large light green, large white, large dark green, and large light green." Introduced for study and experimental tests by this office.

Chionanthus retusa Lindley. (Oleaceae.) 41259. Seeds of the Chinese fringe-tree from Pan shan near Hangchow, China. "Generally seen as a shrub, but occasionally found as a tree, a most beautiful and striking object when covered with its multitude of small finely dissected white flowers, which are delightfully fragrant. Bears in early fall masses of blue black berries. This plant naturally loves rocky mountain slopes and contrasts well with boulders and stones. Is used by Chinese gardeners in Shan tung as a grafting-stock for the tea-olive, *Olea fragrans*, no doubt to keep the latter dwarf and cause it to withstand drouth much better than when on its own roots. Much recommended as an ornamental garden and park shrub, especially for those sections of the United States where the winters are not too severe. Local Chinese name *Swe tsin tiao*." (Meyer's introduction and description.)

Citrus nobilis deliciosa (Tenore) Swingle. (Rutaceae.) 41088-91. Cuttings of four mandarins from Redland Bay, Queensland, Australia. Presented by Mr. James Collins. 41124. Seeds from Rev. R. E. Pettigrew, Paranagua, Brazil. Presented by Rev. A. J. Holt, Kissimmee, Florida. "Brazilian tangerine. Mr. Pettigrew tells me that this is the finest tangerine that grows, that it is as large as a grape fruit and sells in New York at 25 cents each." (*Holt.*) 41270. Cuttings of a mandarin from Suva, Fiji Islands. Presented by the Superintendent, Department of Agriculture. "The local mandarins are most excellent in quality, of large size, good flavor and juicy, but with skins rather coarse." (*C. H. Knowles.*)

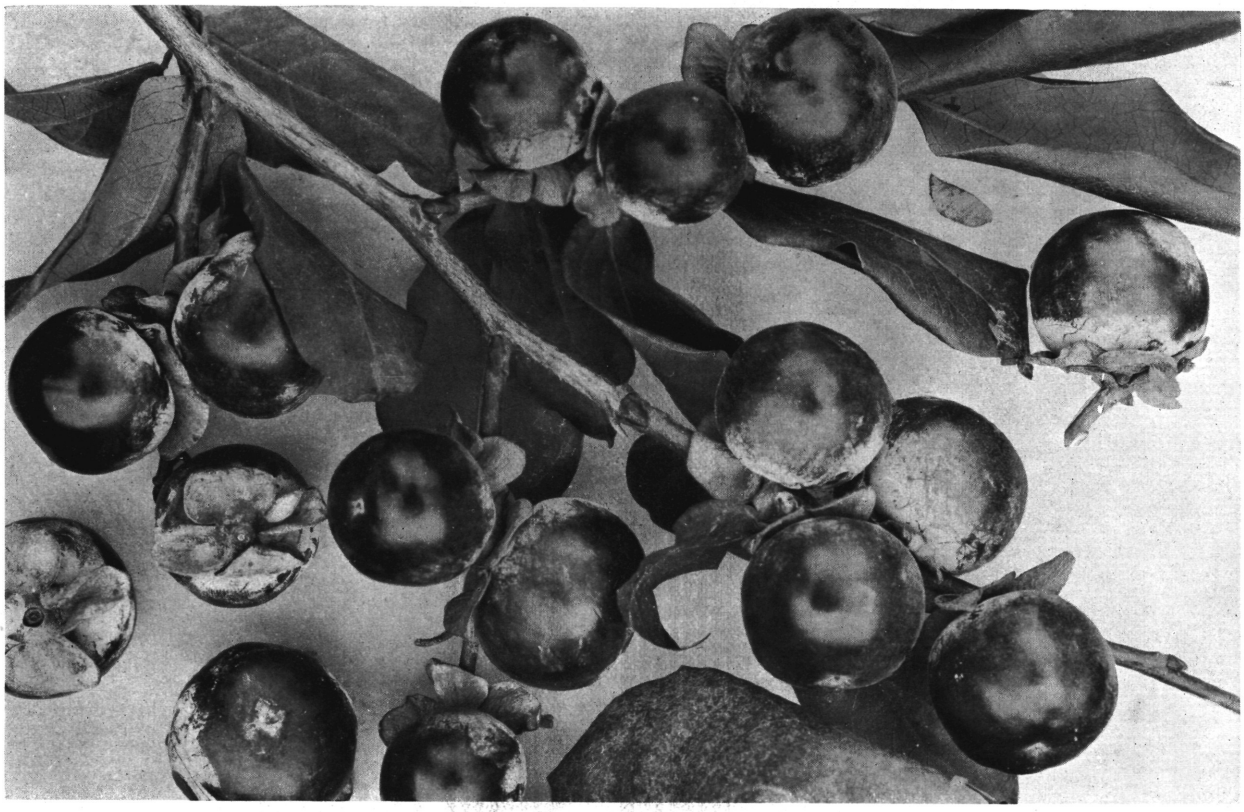
Citrus sp. (Rutaceae.) 41099. Cuttings of a sweet lemon from Santa Ana, Peru. Presented by Mr. O. F. Cook. "A large and very vigorous form of the sweet lemon, a rather popular fruit in the Urubamba valley." (*Cook.*)

Escallonia spp. (Saxifragaceae.) 41105, 41112. Cuttings from Pinasniocj, Peru. Presented by Mr. O. F. Cook. 41105. "*Tasta.* A tree related to the *Chachacoma*, but with much smaller leaves and more horizontal branches giving the general appearance of a hemlock or other coniferous tree. Attains an altitude of 12,000 feet where heavy frosts are of nightly occurrence during the winter. Should be tested first along the Pacific Coast." 41112. "*Chachacoma.* A tree of ornamental value, producing clusters of white flowers for a long period during the winter months. The trees attain a height of 30 or 40 feet and a diameter of 2-3 feet. The wood is of excellent quality, having very little grain and used especially for carving and household utensils. Should endure frosts and may prove useful, especially along the Pacific Coast." (*Cook.*)



Near view of Tree-Hazel (S.P.I. No. 39907), Kansu, China.

"The trunk of a tree-hazel, *Corylus thibetica ferox* (Bat.) Franch., over 80 feet in height, with a girth of several feet at the base. This hazelnut might be cultivated as a nut-tree on stony mountain slopes; it can also be planted as an ornamental park tree, while possibly it may also be utilized in certain hybridization experiments in connection with *Corylus colurna*, another tree-hazel." Photograph by Frank N. Meyer, near Pao dji, Kansu, China, November 7, 1914. See Plant Immigrants No. 106, February, 1915, for description of this tree.



Diospyros Lotus Fruits (S.P.I. No. 40024), Natural Size.

"A variety of the 'ghoorma' having much larger fruits than the ordinary type, while their color is yellowish. Some of these fruits look so much like miniature *kaki* persimmons that one wonders if *D. kaki* could not have been derived from this species in the remote past." Photograph by Frank N. Meyer, Lian dja pa, Kansu, China, October 20, 1914. See Plant Immigrants No. 107, March, 1915, for description of this fruit.

Eugenia sp. (Myrtaceae.) 41057. Seeds of the guava-berry tree from St. Croix, Danish West Indies. Presented by Mr. Longfield Smith, Director Agricultural Experiment Station. "The fruits of this tree make a delicious preserve with an aromatic flavor; they are also used with rum for making a liquor called guava-berry rum." (*Smith.*)

Eugenia sp. (Myrtaceae.) 41110. Cuttings from Pinasniocj, Peru. Presented by Mr. O. F. Cook. "Extremely beautiful tree, with fine glossy deep green foliage contrasting with a smooth light-colored, graceful trunk and branches." (*Cook.*)

Euscaphis japonica (Thunb.) Dippel. (Staphyleaceae.) 41263. Seeds from near Hangchow, Chekiang, China. "A shrub, with deciduous pinnate leaves, bearing apparently white flowers, followed by capsules which turn from green to a brilliant red when ripening. Found on stony and waste places. Of use as a park shrub for mild wintered regions." (*Meyer's introduction and description.*) "A deciduous bush up to 12 feet high, with stout, pithy branchlets and prominent buds; twigs smooth. Leaves 6 to 10 inches long, opposite, consisting usually of 7 or 9 leaflets. Leaflets opposite, ovate 2½ to 4 inches long, long-pointed, shallowly toothed, smooth except for a little down near the base of the midrib. Panicle terminal, branching, 4 to 9 inches long, carrying numerous yellowish white flowers, each about ¼ inch across. Fruit consisting of 3 somewhat boat-shaped, spreading, rosy pink pods, ½ inch long; seeds black. Native of China, Corea, and Japan. This shrub is not only closely related to the bladder-nuts (Staphylea), but also bears much resemblance to them. It differs in the larger number of leaflets, in the smaller individual flowers, and in the smaller, differently shaped fruit. Unfortunately it is not very hardy, and can only be grown outside permanently in the mildest localities." (*W. J. Bean.*)

Furcraea sp. (Amaryllidaceae.) 41193. Bulbs from Ollantaytambo, Peru. Presented by Mr. O. F. Cook. "*Chuchao.* A native fiber plant very abundant in the dry districts about Ollantaytambo, and ascending to an altitude of over 10,000 feet. Propagates by bulblets which are produced on the inflorescences, with or without flowers. May have possibilities as a hardy type, very easy of propagation." (*Cook.*)

Manihot dulcis (Gesner) Baillon. (Euphorbiaceae.) 41103, 41121-22. Cuttings of three varities of sweet cassava from Peru. Presented by Mr. O. F. Cook. 41103. "*Yuca.* San Miguel, Peru. A seed-bearing native grown at the upper rim of the tropical belt, at an altitude of 6,000 feet." 41121. "*Yuca.* Santa Ana, Peru. A native seed-

bearing variety grown at an altitude of 3,000 feet." 41122. "A variety grown along the coast between Lima and Callao, in a rather cool climate. All three varieties should be tested in California and the South." (*Cook.*)

Melinis minutiflora Beauv. (Poaceae.) 41148. Seeds of molasses grass from Macuco, E. do Rio, Brazil. Presented by Mr. T. R. Day. "There are two grasses here that are worthy of special mention, the doubt as to adaptability being with regard to the winters in the Southern States, which I understand are in some places fairly severe. They are called *Capim Gordura Roxa*, and *Capim Jaragua*. *Capim Gordura Roxa* means literally 'greasy purple grass'. I have seen *Capim Gordura Roxa* live down the wild fern that is such a plague in some districts, and form (where not pastured) a dense carpet between three and four feet thick upon which it was almost possible to walk. Riding or walking through it in the pasture under normal conditions the proportion of wax and grease on the blades is sufficient to thoroughly clean and polish one's boots; this is no exaggeration, but is often remarked. It is not a watery grass, but unusually palatable to cattle and horses and the blades secret a wax or grease that according to one analysis totals as much as 3.22 per cent of the dry digestible matter. It is sensible to the finger , which it makes quite sticky. I have not met it in any other country, and I believe that it is indigeous to the central part of Brazil, not thriving right down in the South nor in the sandier coast states of the North. It is a fairly good drought resister, and comes up fairly well again after a fire. There is a related variety called *Capim Gordura Branco* (*Branco* means white) of a bright emerald green color, but without the resistence of the *Roxa*, and also not stooling so well. I have found both of the above grasses growing away from sea level up to 2000 meters on Caparaó, the highest mountain of Brazil, and I have found it at 1000 meters living down the wild fern (both these altitudes are susceptible to frost), and I have ridden through it on the uplands of Minas Geraes coated with a dense white frost." (*Day.*)

Myrica rubra Sieb. & Zucc. (Myricaceae.) 41256. Seeds from Hangchow, Chekiang, China. "A large fruited variety of the so-called strawberry tree or *Yang mae*. The fruits are the size of crabapples, of dark purple color and very attractive looks. They can be used in a multitude of ways, like out of hand, boiled in compotes, in pies, for syrup, and for wine. In general there exists a great variation among the trees as regards general habit, productivity, etc. The fruits themselves vary also greatly in color, size and

taste. The best varieties are propagated by inarching. The trees are evergreen, they thrive best on well drained, rocky terraces. The localities that will best suit them in the United States will probably be the Southern sections of the Gulf Coast States and the milder parts of California. Chinese name *Yang mae*." (Meyer's introduction and description.)

Osteomeles sp. (Malaceae.) 41111. Plants from Pinasniocj, Peru. Presented by Mr. O. F. Cook. "*Lengli*. A very attractive tree, with deep green, holly-like foliage and clusters of red berries. Somewhat resembling our thornapple trees, Crataegus, but with much more handsome evergreen foliage. Should be of interest for Pacific Coast if it should be found to thrive." (*Cook.*)

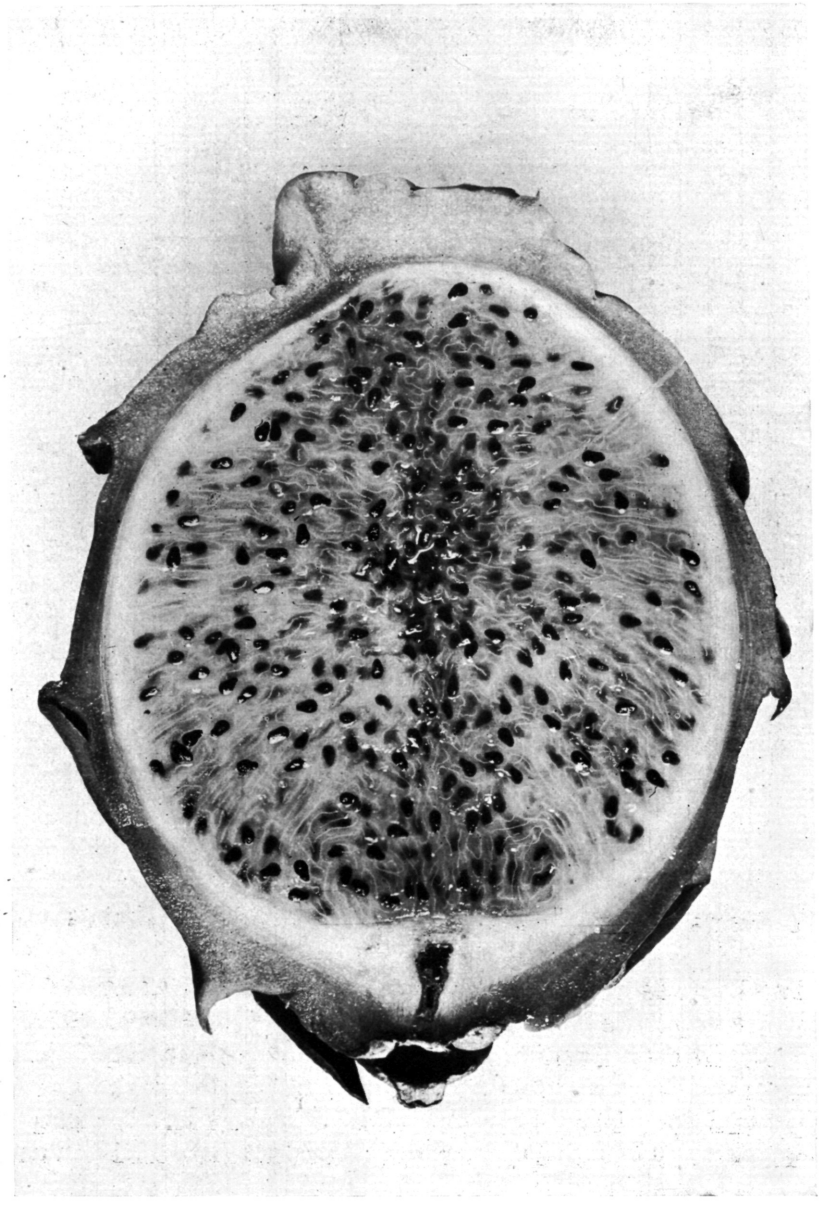
Oxalis tuberosa Molina. (Oxalidaceae.) 41168-76. Tubers of oca from Ollantaytambo and Sicuani, Peru, and La Paz, Bolivia. Presented by Mr. O. F. Cook. "A plant related to our common sheep-sorrel, widely cultivated in Peru and Bolivia for the sake of its fleshy root-stocks, which are an important article of food. In some districts ocas are second only to potatoes, while in others ullucus are more important, or at least are sold more generally in the native markets. Ocas are eaten raw, as well as cooked, and are also frozen and dried. Ocas prepared in this way are called *caya*, a term corresponding to chuno (chunyo), the name of the dried potatoes. Raw ocas, when first dug, have a distinctly acid taste, like sheep-sorrel, but this is lost after the tubers have been exposed to the sun. The plant attains a height of one foot or more and has the general appearance of a large sheep-sorrel. The flowers are yellow and the leaflets are folded at night or in wet weather, the same as in the sheep-sorrel. The varieties are numerous, though much fewer than in the case of the potato. Some are preferred for eating raw and others for the making of *caya*. The texture of the tubers is very tender and juicy. In form some are nearly cylindrical, while others are slender at the base and strongly thickened at the end. The colors vary from white or light pink through darker pinks or yellows to deep purplish red. The range of colors is much the same as in the ullucu, but no deep yellow varieties were seen, nor any with spots, except that some have bands of deeper color across the eyes. In addition to the pleasing coloration, the surface of the tubers is smooth and clear, so that the general appearance is very attractive. The texture of the flesh is also very tender and crisp. If the taste should prove acceptable ocas might become very popular for salads and pickles, if not for other purposes. The nature and habits of the plant

indicate that it may be adapted to acid soils, which would be a distinct advantage in some parts of the United States." (*Cook.*)

Pennisetum longistylum Hochst. (Poaceae.) 41055. Cuttings of Kikuyu grass from Pretoria, Union of South Africa. Presented by Mr. I. B. Pole Evans, Chief, Division of Botany. "We originally obtained this grass from British East Africa, and it, so far as our experience goes, would appear to be one of the most promising grasses that we have in this country. So far, although the grass has been under cultivation at our Botanical Station for the past 4 years, it has shown no signs of forming seed and it was only last summer that it flowered and enabled us to have it determined botanically. The grass has a creeping habit and cattle are passionately fond of it; it also makes a nice hay grass." (*Pole-Evans.*)

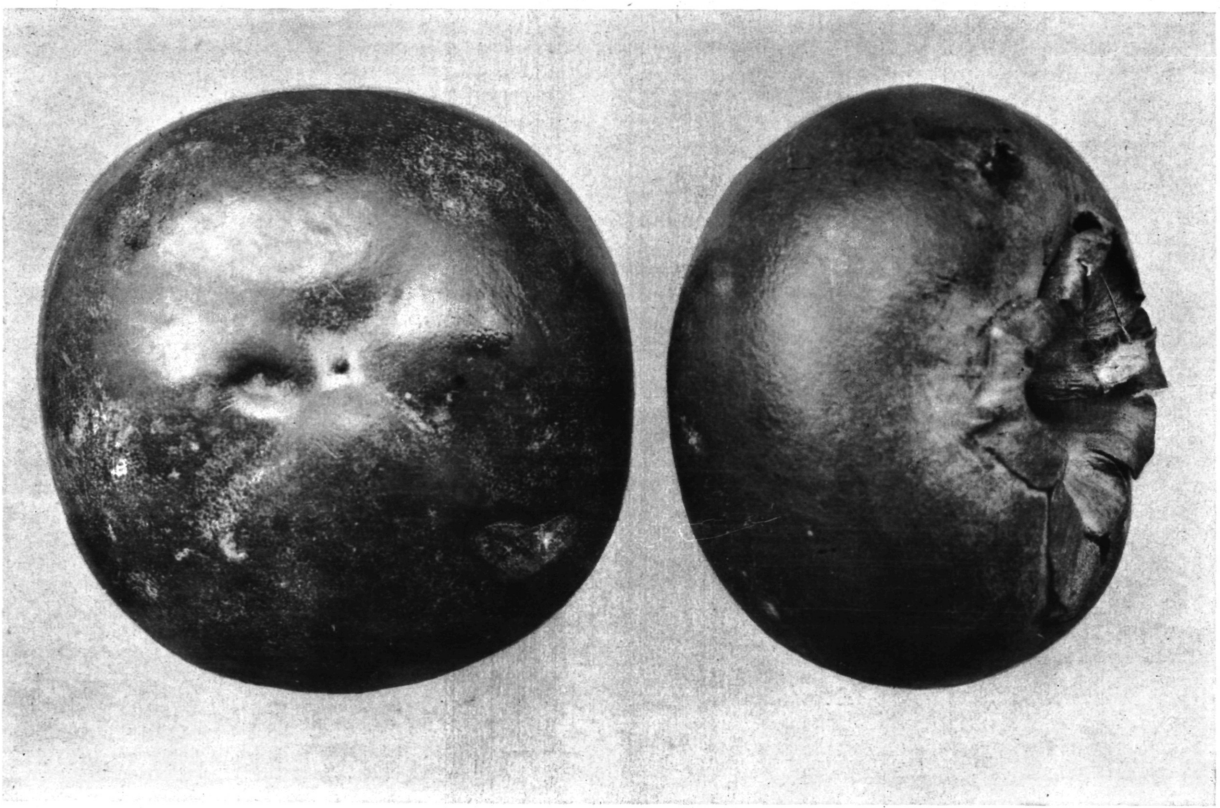
Pimenta officinalis Lindley.(Myrtaceae.) 41134. Seeds of allspice from Kingston, Jamaica. Presented by Mr. W. Harris, Superintendent, Hope Gardens. "A small tree with smooth, white bark, 25 to 30 feet high, native of the West Indies and Central America. The dried unripe berries, which are the size of small peas, are the Allspice or Pimento of commerce. The name 'all-spice' is due to a supposed resemblence of the spice to a combination of the odour and flavour of cinnamon, nutmegs and cloves. The tree has been introduced into Ceylon over a century ago, and established at Peradeniya, where it flowers in the dry weather and occasionally sets a few fruits,but outside the Botanic Gardens it is rarely met with in this country. It is considered to yield best in a hot and rather dry climate, and prefers a loose loamy or alluvial, well-drained soil. In Jamaica the berries are picked by hand while green, but just ripe, and are then dried in the sun, the latter process taking six to ten days. The fruits are known to be sufficiently dry when the seeds rattle on shaking and are of a dark colour. A crop cannot be expected within six or seven years from the time of planting, and when in full bearing a tree will yield a hundredweight of dried spice. Jamaica is the only country that exports this spice, which is sold at present in England at about 2d. to 3d. per pound." (*MacMillan, Handbook of Tropical Gardening and Planting.*)

Polakowskia tacaco Pittier. (Cucurbitaceae.) 41141. Fruits of *tacaco* from San Jose, Costa Rica. Presented by Mr. J. E. Van der Laat,Director, Department of Agriculture, through Dr. Carlos Wercklè. "The *tacaco* is not of perishable nature, as the chayote; it has a hard skin, when ripe, and keeps in perfect condition for weeks; at last it shrivels and in this state it is planted. The fruits for plant-



The Pitaya Fruit in Cross-Section, Natural size.

The fruit of this cactus, probably *Cereus triangularis*, is commonly sold on the Havana market in July and August. The color is a beautiful deep pink, while the soft translucent sweet pulp is whitish. Photograph by Wilson Popenoe, July 30, 1914, No. 16110. Havana, Cuba.



"Loaf of Bread Persimmon" (S.P.I. No. 39912), Natural Size.

"A singularly beautiful variety of persimmon of well-rounded form. Heavy, very juicy and sweet, seedless, color pale orange. Chinese name *Momo sze tze*, meaning 'Loaf of Bread Persimmon.'" Photograph by Frank N. Meyer, Cheng hsien, Kansu, China, October 5, 1914. See Plant Immigrants No. 106, February, 1915, for description of this variety.

ing are chosen from those which fall off the vine when dead ripe. They can not be planted in the soil; they do not sprout. The best is to bury them in rotting leaves; they will also grow on the earth, with a layer of dead leaves on them." (*Werckle.*)

Primula spp. (Primulaceae.) 41277-81. Seeds of five primroses from Bhutan, India. Presented by Bees Limited, Liverpool, England, at the request of Mr. A. K. Bulley.

Prunus salicina Lindley. (Amygdalaceae.) 41257. Seeds of a plum from Hangchow, Chekiang, China. "A medium sized plum, clingstone, of reddish color, meat juicy and sweet in the center, but somewhat astringent near the skin and decidedly sour near the stone. The trees grow dense and low and are able to grow on water-logged land, that is, they thrive with the surface-water only a few inches away at times. Of value for breeding purposes, especially for the Gulf coast states." (*Meyer's Introduction and Description.*)

Solanum bonariense L. (Solanaceae.) 41312. Seeds from Buenos Aires, Argentina. Presented by Mr. Benito J. Carrasco, Director General, Botanic Garden. Tender evergreen solanaceous shrub up to 10 feet high, with ovate-oblong, sinuate-repand leaves; long lateral racemes of large white flowers; and globose yellow berries. Native of Argentina where it is called *Duraznillo blanco*. Said to have medicinal properties.

Solanum tuberosum L. (Solanaceae.) 41197-243. Tubers of 47 varieties of potato from Peru. Presented by Mr. O. F. Cook.

Triticum spp. (Poaceae.) 41064-87. Seeds of 24 varieties of wheat from Sydney, New South Wales, Australia. Presented by Mr. George Valder, Under Secretary and Director, Department of Agriculture. "The Department's Plant Breeder states that all the following varieties are winter wheats here, but if sown at the same season as such sorts in America they would probably be winter killed. It is suggested that they be sown as spring wheat, with the exception of Marster's Perfection (S.P.I. No. 41072) which should stand the frosts of winter. It may be mentioned that samples of the ordinary varities recommended to farmers in this country have invariably been sent abroad, and almost without exception have proved unsuitable for American and European conditions. It has been found that they either become eaten up with spring rust or do not survive the winters." (*Valder.*)

Tropaeolum tuberosum Ruiz & Pavon. (Tropaeolaceae.) 41185-86, 41195. Tubers from Peru. Presented by Mr. O. F. Cook. "One of the Andine root-crops, generally cultivated in the potato growing districts of the plateau region of

Peru. Though apparently less popular than the Oca and Ullucu, the *Anyu* has one important advantage over all the Peruvian root-crops, including the potato, in its keeping qualities. Specimens collected in the district of Sicuani on April 9th were kept for three months at Ollantaytambo, and then brought back to Washington, and were still in good condition the middle of September. This means that the *Anyu* tubers would be very easy to handle commercially in case they should prove to be of use in the United States. In Peru they are eaten like potatoes, papa lisas, and ocas, chiefly in the form of soups. The *Anyu* plant is a rather close relative of another Peruvian species, *Tropaeolum majus*, a familiar ornamental cultivated in the United States under the name Nasturtium. Hybrids between these two species might be of interest as affording a possibility of securing ornamental varieties that could be propagated from tubers. The flowers of *T. tuberosum* are not so large as those of *T. majus* and do not open so widely, but in other respects the general appearance is much the same. Experimental plantings of *Anyus* should be made in the elevated districts of the southwestern states, and along the Pacific Coast. In comparison with potatoes there appear to be very few varieties of *Anyus*." (*Cook.*)

Ullucus tuberosus Caldas. (Basellaceae.) 41177-84, 41194, 41196. Tubers of 9 varieties of Ullucu from Peru and Bolivia. Presented by Mr. O. F. Cook. "The *Ullucu* or *Papa lisa* is a root-crop, raised generally in the highlands of Peru and Bolivia, in the regions where potatoes are grown. The tubers have a remarkably close resemblance to potatoes, except that the skins are smoother and the colors brighter, running from white through various intermediate shades to deep yellows and reds. There are also spotted varieties, white and pink or light yellow and pink. Judging from its representive in the native markets, the *papa lisa* ranks next to the potato in popular favor in Peru, being used largely in the making of soups, which is the principal branch of the culinary art among the Indians. The flavor of the *papa lisa* is peculiar, and usually not attractive to the unaccustomed palate. But being one of the plants that accompany the potato in Peru, it may not be without interest to observe its behavior in the United States. The tubers are produced in abundance and if the plant should be found to grow readily the possibilities of utilization should be carefully studied. The plant is a relative of the so-called Madeira vine, familiar in cultivation as an ornamental climber. A wild *Ullucu*, common in the region of Sicuani, is very similar to the Madeira vine but the plants of the cultivated varieties do not attain a length of more than two or three feet. The general appearance and habit of growth are also somewhat like those of the sweet potato." (*Cook.*)

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